

# House Design in the 19th Century: Urban and Rural Vernacular Architecture of North Macedonia

Petar Namicev<sup>1</sup> & Ivanka Nestoroska<sup>2</sup>

<sup>1</sup>Art Academy, Goce Delcev University, Stip, North Macedonia

Email: petar.namicev@ugd.edu.mk

<sup>2</sup>Faculty of Tourism and Hospitality – Ohrid, St. Kliment Ohridski University,

Bitola, North Macedonia

Email: ivanka.nestoroska@uklo.edu.mk

## Abstract

This study delves into the captivating world of 19th-century house design in North Macedonia, shedding light on the enchanting interplay between the rural and urban vernacular architecture. Its aim is to uncover the local characteristics and influences that have shaped residential architecture in both landscapes, including the indelible mark of Ottoman residential buildings and the allure of Mediterranean concepts. The research employs a multi-stage methodology, collecting data during 2018-2020 through on-site field trips to three villages and three cities in North Macedonia known for their traditional houses. This involved observing external and internal features, measuring their architectural appearance, and photographing them. The collected data were processed based on criteria to determine differences in the design of rural and urban houses resulting in original drawings.

The investigation examines diverse facets of building structures, durability, decoration, interior furnishings, applied materials, and construction methods. The objective of the study is to reveal the unique features and qualities that distinguish rural and urban house designs. It emphasizes the importance of preserving cultural identity by safeguarding architectural traditions. It argues that by valuing the indigenous and local characteristics, one can acquire a better understanding of the historical and cultural significance of these structures. This comprehension can, in turn, inform modern architecture and inspire new design ideas that could incorporate traditional elements.

Its findings and insights will be of interest to scholars and practitioners in the fields of architecture, cultural studies, history, and beyond, beckoning those seeking to gain a deeper understanding of the significance of vernacular architecture in North Macedonia.

**Keywords:** Built environment, Construction, Tradition, Culture, North Macedonia.

## Introduction

The Balkan region is renowned for its cultural heritage. Traditional architecture plays a crucial role in preserving this heritage. Each period of history has left a unique imprint on the architecture of the region, reflecting the historical, cultural, and environmental factors of the time. The Ottoman period, which marked the final phase of architectural development in the

Balkans has particularly influenced the region's architecture with its distinctive features. However, the presence of interactions between the various cultures and civilizations, as well as the influence of local traditions and customs, have resulted in regional variations in architecture (Oliver, 2003, 2007; Pavlović, 1987; Spicer, 2019).

The concept of traditional architecture is primarily shaped using local materials, such as stone, clay, and wood, which have been successfully adapted to the local climatic conditions, including insulation, ventilation, and light (Oliver, 2003; 2007). Over time, the concept has evolved, with functionality of the space following the living conditions that represent the cultural peculiarities and identity of the region and the locals. This includes applying ecological concepts, such as using natural materials and creating a cultural heritage with specific building techniques (Oliver, 2007).

Some traditional architectural structures, particularly those found in the rural areas that are well preserved, possess the potential to be adapted as commercial buildings (Pavlović, 1981). However, these transitions require careful consideration of multiple factors, including the availability of preserved infrastructure such as housing and transportation options, the organization of various activities like festivals, exhibitions, and fairs, and the presence of essential amenities such as spa centers, water sources, ports, mountain facilities, as well as archaeological and historical sites (Findrik, 1981).

Destinations everywhere are adapting themselves to the homogenizing corporate culture as they try to commodify their unique local attributes. They promote local heritage and sell packaged experiences of authentic natural landscapes and traditional cultures. Consequently, vernacular architecture assumes an important role as a valuable cultural resource for fostering local development. It is globally used for entertainment, leisure, and recreation along with the benefits, like reducing negative impact of modernization upon local traditions and traditional styles of houses, communicating local cultural identity to visitors, and raising awareness for the heritage values.

Vernacular architecture in the Balkans, including North Macedonia, has long been the subject of research interest due to its cultural and historical significance. There is a growing body of literature on traditional architecture in the region (Cenker & Pajović, 2020; Grchev & Grcheva, 2019; Ivkova, 2020; Kik, 2020; Marković & Zorić, 2020; Milić & Milić, 2020; Mitkova-Petrovska & Blaževska, 2020). Furthermore, there have been numerous studies analyzing rural and urban vernacular houses in North Macedonia (Bojadziev, 2010; Dzambazovski, 2009; Ivkova, 2014; Kocani, 2006; Namicev, 2014; Namicev & Namiceva, 2016; Stojanovski, 2015). Yet, there is always a need for new research to strengthen the focus on preserving the traditional architecture and promoting it.

The aim of this study is to acknowledge the differences in design, materials, and functions between the two types of housing in the 19th century. The paper offers original illustrations of real case rural and urban houses with drawing accuracy that describes building details, providing a first-hand visualization that enables better understanding of the research. North Macedonia is chosen as a country with valuable examples of traditional houses in rural and urban environments.

It highlights the ways in which architecture reflects the cultural and social differences between rural and urban settings from the 19<sup>th</sup> century. The focus is on the need to protect and preserve the historical and cultural forms of the architectural traditions and to recognize its importance in creating new innovative strategic dimensions in architecture by combining the past patterns and future expectations.

## Literature Review

Traditional architecture of the Balkans is an exceptional combination of cultural, historical, and environmental influences. In particular, the Ottoman Empire played a significant role in shaping the architectural features of the region, including the use of domes, arches, and decorative motifs that are unique to Ottoman architecture. Over the centuries, the region has developed a rich and diverse architectural heritage that reflects the changing needs and preferences of local populations.

## Traditional Architecture in the Balkans

Traditional architecture in the Balkans is vastly explored generally highlighting the importance of preserving the cultural heritage of the region through the preservation of traditional building techniques and styles. Different studies focus on the specific characteristics and features of traditional architecture in different regions of the Balkans.

Buturovic and Lampe (1998) have conducted one of the earliest studies of traditional architecture in the Balkans. They provide an overview of the historical and cultural context of traditional architecture in Bosnia and Herzegovina, as well as its role in shaping the country's identity. This finding is reaffirmed and confirmed later by Jahić and Huseinović (2020) who notably highlight the crucial role of traditional architecture in sustaining cultural identity.

Dragicevic-Sesic and Prpa (1994) have examined the influence of Ottoman, Austro-Hungarian, and Yugoslav styles on the region's traditional architecture. They elaborate the case of Kosovo. They also provide a comprehensive analysis of historical and cultural influences that have shaped the traditional architecture of Kosovo, including the Ottoman, Serbian, and Albanian architectural styles. They further discuss the challenges facing the preservation of traditional architecture due to modernization and development. Sulstarova and Vrapi (2009) and Kik (2020) conclude the same finding when analyzing the case of Albanian architecture and the unique features of each style and how they have evolved over time. They examine the distinctive features of traditional Albanian houses in rural and urban areas, such as the use of local materials, the incorporation of courtyards, and the use of decorative motifs. Besides highlighting the influence of various cultures, including the Illyrians, Greeks, Romans, Byzantines, and Ottomans, Sulstarova and Vrapi (2009) also emphasize the lack of government support and funding.

Marković & Zorić (2020) and Vujovic (2016) provide a detailed analysis of the different architectural styles and traditions that have influenced Serbian architecture. They analyze the influence of Byzantine and Ottoman styles on Serbian traditional architecture, as well as the use of wood and stone in the incorporation of balconies and verandas, and the use of ornamental decorative elements. They also discuss the importance of preservation, promotion, and contemporary adaptation of traditional architecture in Serbia.

Krestev and Dimitrova (1982; 1997) analyze the influence of Byzantine, Ottoman, and Bulgarian styles on traditional Bulgarian architecture by offering a comprehensive overview of the unique features, such as the use of wood, stone, and mud, the incorporation of courtyards and gardens, and the use of decorative motifs. They also underscore the profound challenges and impacts of modernization on keeping the uniqueness of traditional architecture in Bulgaria.

Banović (2016), Milić and Milić (2020), and Radović (2018), focus on the preservation and adaptation of traditional architecture in Montenegro. They examine the architectural characteristics of Montenegrin houses, which have evolved through different historical periods and are unique due to the influence of different cultural and historical factors. They also focus on challenges and opportunities that arise when preserving and adapting traditional architecture to contemporary needs.

## Traditional Architecture in North Macedonia

North Macedonia, as part of the Balkans, boasts traditional architecture that has been shaped by Ottoman and Balkan styles. The exploration of this architecture has captured the interest of many authors who examine the differences in materials and construction techniques used in rural and urban areas, as well as the function of these two types of housing. Rural houses are typically constructed using stone, wood, mud, and thatch, whereas urban houses employ brick, stone, and cement (Kocani, 2006; Namicev, 2009, 2022; Nanev, 2003). Scholars have also noted that the design of these houses varies based on the region and the climate, and that local materials are usually used.

Dimitrova and Stamboliski (2013) offer a comprehensive analysis of the unique features of Macedonian architecture, particularly the use of stone and decorative ornamentation. Kocani (2006) uses a comparative approach to identify differences in vernacular architecture,

examining selected factors as materials, construction techniques, and design features. He also delves into the use of wood and stone in roofing and windows.

Stojanovski (2015) presents a historical overview of the traditional houses in North Macedonia, encompassing their origin, evolution, and classification. According to the author, urban and rural traditional houses manifest similar characteristics, notably the utilization of natural resources, the adjustment to the local weather and landscape, and the portrayal of communal and traditional values.

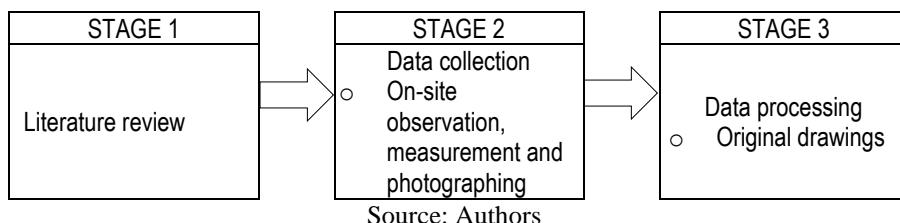
Nanev (2003) provides an overview of traditional architecture in the Balkans, with a particular focus on North Macedonia. He notes that urban houses are usually built in a compact manner designed to accommodate larger families and serve as a status symbol, while rural houses are more utilitarian with simple, functional furniture and tend to be dispersed to accommodate animals.

Bojadziev (2010) demonstrates the diversity and complexity of Macedonian architecture through an analysis of the building materials, structural elements, and decorative motifs. He emphasizes the importance of understanding the cultural and historical identity reflected in traditional architecture. Similarly, Dzambazovski (2009) underlines the significance of understanding the historical and social context in which architecture in North Macedonia developed, with economic conditions, political structures, and cultural traditions as key factors that shaped the architectural features.

Despite the interest and efforts of scholars, the preservation of traditional architecture in North Macedonia faces numerous challenges, including a lack of government support and the impact of modernization. Overall, the authors provide valuable insights into the unique features of traditional architecture in North Macedonia and highlight the importance of preserving this cultural heritage.

## Research Construct

A three-stage methodology was employed for this study (Fig. 1).



In the first stage, a qualitative method was utilized, involving a comprehensive document survey on traditional architecture in the Balkan region and specifically North Macedonia.

The second stage encompassed on-site data collection through multiple field trips conducted between 2018 and 2020. From the extensive field research, a limited number of rural and urban houses were selected for detailed analysis. This research presents data for three rural houses (out of nine) from the villages of Jablanica, Stence, and Volkovija, as well as three urban houses (out of ten) from the cities of Tetovo, Kratovo, and Veles. Data collection involved participant observation (Kawulich, 2005) to examine the external appearance, interior design, and overall functional style of the houses. Various measurements were taken to visualize the architectural design, including the exterior spaces (outer walls, floors, stairs, and doors) and the interior areas (cupboards, ceilings, and fences). Additionally, photo-based images (Holm, 2014) were used to capture the perception of the house designs.

In the third stage of the research, the collected data were processed according to the criteria for assessing rural and urban house styles (Table 1). The evaluation resulted in original drawings by Petar Namicev (co-author) that visually expressed the main characteristics of each specific house design. This multi-staged approach allowed for the integration of scientific and practical findings, employing a scientific research approach (Martin, 2010).

**Table 1:** Criteria for assessing rural vs. Urban house style

Source: Authors

Factors	Criteria
Direct factors (affecting the external appearance of the house)	Space, Construction Building methods Structure Materials (including their source, type, and availability) Surrounding natural environment.
Indirect factors (affecting the interior design of the house)	Decoration Colour schemes Interior layout Building groups
Induced factors (affecting the overall functional style of the house)	Economy of the building Function Tradition

### Case Destination North Macedonia

Traditional architecture of North Macedonia is characterized by its unique autochthonous features, which are reflective of the local architecture found in the Balkan region. The use of stone, wood, and clay, which are readily available in the surrounding environment, is a hallmark of the region's architecture. The structural system is typically comprised of stone walls on the ground floor and manual skeleton construction on the first floor (Namicev, 2009). The roofs are often made of straw, shingles, ceramic tiles, or stone slabs, which provide both protection and define the final aesthetic form of the buildings. When planning and constructing buildings, consideration is given to factors such as ventilation, insulation, lighting, economy of space, heating, and flexibility of the rooms to meet the needs of the family. The final external form of the building is enhanced with decorative elements that reflect the status of the family and the skill of the builders.

In the rural environment, houses are typically organized in farmyards, with houses placed compactly in one spatial unit or with the farmyards. Local materials are usually used in construction, with stone walls predominating in the mountainous regions of the western part of North Macedonia, and 'bondru' construction prevalent in the eastern part of North Macedonia. Processed clay is commonly used for coating walls and floors as a binder. Rural houses tend to be modest, except in regions where migrant workers have influenced the construction of larger, more stylized structures like those found in the urban areas. Designs of the rural houses vary by region, based on local disputes, economic opportunities, and the influence of the builders' styles.

In contrast, the urban traditional architecture found in the 19th-century is characterized by buildings that reflect both local characteristics and indigenous architectural values. The facades of these buildings feature defined stylistic volume elements that are often adorned with colored, stylized forms that, together with the roof constructions, define a symmetrical composition. The size and rhythm of the windows define the basic concept of the exterior appearance, with an original shape. The interior of urban houses is originally furnished with furniture made by the local craftsmen, as well as imported furniture from modern European manufacturers. This blending of traditional craft techniques (such as carving and handcrafting) with modern pieces of furniture from the same period results in a unique cultural identity (Namicev 2022). Although rural and urban houses were constructed during the same period, the influence of the urban architecture can be seen in the form of the rural house in certain regions of North Macedonia (Namicev, 2009).

### Findings and the Discussion

Table 2 provides a concise summary of the findings obtained from the assessment of specific parameters used to differentiate rural and urban vernacular architecture in the 19th-

century North Macedonia in terms of external, internal, and functional attributes. Through on-site observations, various measurements, and photography, this research has revealed several fundamental distinctions.

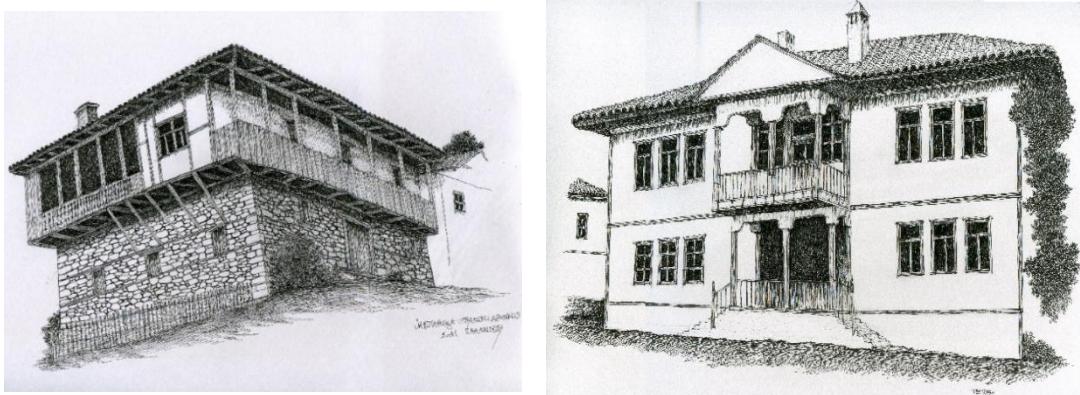
Regarding the direct factors, Table 2 illustrates that vernacular architecture is characterized by a fascinating fusion of indigenous materials, traditional artisanal techniques, and contemporary innovations. However, more significant differences emerge when examining the indirect factors, particularly the interior designs of the houses. These variations are influenced by diverse needs, cultural and historical factors, as well as the surrounding environments, resulting in structures that are both functional and aesthetically pleasing.

**Table 2:** Rural vs. Urban house style  
Source: Authors

	Factors	RURAL	URBAN
DIRECT	Space	Limited	Comfortable
	Construction	Local	
	Building method	Modest	Sophisticated
	Structure	Functional	
	Materials	Local	
		Stone, wood	
		Clay	Brick, cement
INDIRECT	Availability of materials	Short term	Long term
		More connected	Less connected
	Natural environment	Minimal	Dominant
	Decoration	Minimal	Dominant
INDUCED	Color	Modest	Decorated
	Interior	Limited	Exposed
	Building groups	Economical	
INDUCED	Economy of the building	Simple	Complex
	Function	Local	Regional
	Tradition		

### Differences of appearance

Fig. 2 presents original drawings of the real cases in North Macedonia, effectively demonstrating the prominent role of *space and construction* as key distinguishing factors in the exterior appearance of rural and urban houses. In Fig. 2a, we observe a primary illustration of a rural house in the village of Jablanica (Struski Drimkol), exemplifying the distinctive style of a typical rural dwelling. Rural houses tend to be expansive, often featuring multiple floors and offering greater spatial flexibility. They embrace a simple and pragmatic design, typically comprising three distinct sections dedicated to living, cooking, and agricultural product storage. Conversely, Fig. 2b showcases an original drawing of a specific urban house in the city of Tetovo. Urban houses, in contrast, tend to be smaller, frequently limited to one or two floors, and often adopt a compact form due to the constrained urban core areas. Compared to their rural counterparts, urban houses feature smaller rooms with various functions such as bedrooms, living rooms, kitchens, and bathrooms. They often incorporate multi-story designs and allocate less spaces for storing agricultural produce.



**Fig. 2a:** Rural house, Jablanica, Struski Drimkol

**Fig. 2b:** Urban house, Tetovo

**Fig. 2:** Rural vs. Urban house: space and construction  
Source: Original drawings of Petar Namicev (co-author)

Regarding the *structure* as an element that defines differences in the external appearance of the houses in villages and cities, both types of houses are very functional. Rural houses typically exhibit a single-story layout with a central fireplace serving as a focal point for both cooking and heating. These houses are customarily adapted to rural lifestyles centered around agriculture and animal husbandry. In contrast, urban houses often integrate elements from Ottoman and Balkan architectural styles, reflecting the intricate cultural history of the region.

Differences are also apparent in the chosen *building method*, with rural houses employing modest techniques tailored to the rural environment, local construction concepts, and the economic constraints of the region. Urban houses, on the other hand, necessitate a more sophisticated approach due to densely populated settlements and limited available space for construction. As a result, the construction methods employed in urban areas are designed to cater to the specific needs of the urban population.

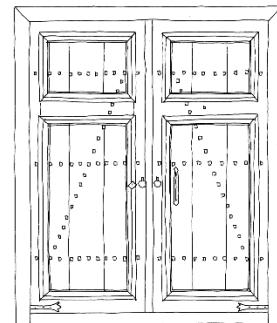
Both types of houses generally employ locally sourced *materials*, yet there are slight disparities in terms of the type and availability of materials. Rural houses, particularly masonry structures, commonly utilize stone and clay, with occasional incorporation of wood in certain areas such as the roof structure. This signifies the utilization of readily available local materials. In contrast, urban houses employ a combination of stone, wood, and more durable materials like brick and cement, which ensure long-term availability and resilience.

The *natural environment* also plays a significant role in shaping the outer appearance of houses in both areas. Rural houses exhibit a direct and substantial connection to Nature, particularly due to their locations in mountainous terrains. Conversely, urban houses have a relatively weaker connection to the natural environment, predominantly situated in lowland areas within cities, with only a few exceptions in mountainous regions.

### Differences of interiors

Significant disparities emerge when examining the interior design of houses in rural and urban areas.

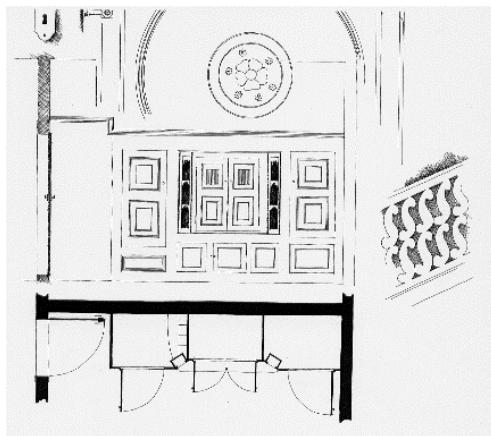
Fig. 3 shows authentic drawings of real cases in North Macedonia, emphasizing the role of *decoration* as a crucial element in the internal appearance of the traditional houses. Fig. 3a presents an original illustration of a rural house jetty in the village of Stence (Tetovo region), commonly utilized as an exterior decoration. Rural houses tend to have fewer windows due to spatial considerations, whereas urban houses often incorporate more windows to maximize natural light and ventilation. Conversely, urban houses employ prominent external decorations, as exemplified in the Fig. 3b, depicting an original drawing of an urban house in Veles.

**Fig. 3a:** Jetty, rural house, Stence, Tetovo region**Fig. 3b:** Outdoor, urban house, Veles**Fig. 3: Rural vs. Urban house: Exterior decoration**

Source: Original drawings of Petar Namicev (co-author)

Utilization of *color* in vernacular architecture differs between the two areas, with rural settings tending towards minimal color usage while urban areas exhibit more dominant color schemes. In rural houses, the application of color is less pronounced and primarily serves the purpose of enhancing the structural integrity and durability of the materials used. In urban houses, color is prominently expressed through exterior decorations such as eaves, bay windows, tympanums, windows, and doors.

Fig. 4 showcases original drawings of real cases in North Macedonia, highlighting *interior decorations*. Figure 4a illustrates original rural house decoration in the village of Volkovija, Reka, Gostivar region, while Figure 4b originally depicts the interior of an urban house in Kratovo featuring a 'musandra' design. Rural houses typically exhibit modest interiors characterized by spacious rooms with low ceilings. In contrast, urban houses feature intricately decorated interiors within smaller rooms.

**Fig. 4a:** Decoration, rural house, Volkovija, Reka, Gostivar region**Fig. 4b:** Musandra, urban house, Kratovo**Fig. 4: Rural vs. Urban house: Interior decoration**

Source: Original drawings of Petar Namicev (co-author)

Another differentiating factor lies in the *building groups*, which indirectly influence the internal outlook of houses. In rural settings, the impact of the builders' work and movement is limited and less pronounced, aligning with the local understanding of building practices. On the other hand, urban houses are subject to more pronounced influences on form and decoration due to the nature of urban construction processes.

### Differences of functions

The overall style of a house is subject to additional factors that generate induced effects, including the economic considerations of construction, functional requirements, and adherence to the local traditions.

In rural houses, *economy of construction* is exemplified by the utilization of locally available natural materials and the adoption of simplistic building techniques. Conversely, urban houses prioritize economical construction practices through material conservation and efficient space utilization within the building.

The distinction in terms of house *function* is a crucial aspect, primarily driven by location and purpose. Rural houses are predominantly situated in rural areas and serve a simple function, primarily focused on agricultural activities. In contrast, urban houses are constructed in urban areas and have multifaceted functions, encompassing commercial, artisanal, and residential purposes.

Furthermore, tradition exerts a significant influence on both rural and urban settlements, albeit at different scales. Rural areas exhibit a strong connection to traditional building practices that are deeply rooted in local customs. On the other hand, urban vernacular architecture incorporates stylistic elements adapted from the broader Balkan region, reflecting the regional traditions of the area.

### Conclusions

The study sheds light on the distinctive features of rural and urban vernacular architecture from the 19th century in North Macedonia. The comparative analysis demonstrates that the building values are equally significant in both environments, with similar common characteristics that carry certain national traits while also displaying some differences. These features contribute to an increased degree of authenticity, confirming the national and cultural identity. The study also found that traditional houses were shaped by the availability of resources, the needs of the community, and the socio-economic status of the owners. Rural houses were dispersed to accommodate agriculture and animal husbandry, while urban houses were built for a compact living environment. These design and material differences reflect the cultural and historical development of the region and continue to influence North Macedonian architecture today. This unique offer not only presents visitors with an immersive experience, but also engenders a wide array of advantages for the local community and fosters regional development on a large scale.

This study, along with previous research by Ivkova (2014), Mitkova-Petrovska & Blaževska (2020) and Ristevska & Tuntevski (2020), highlights the importance of preserving traditional architecture in North Macedonia. Overall, the findings underscore the imperative of safeguarding vernacular architecture while leveraging its potential for local development, creating a symbiotic relationship between heritage preservation, cultural experiences, and economic growth. It is essential to maintain a link to the region's cultural heritage and historical significance, regardless of where the structures were built. The preservation of traditional architecture ensures that future generations can appreciate the unique blend of design, material, and cultural influences that make up vernacular architecture in North Macedonia.

The study also draws attention to the lack of government support for adapting and sustainably maintaining vernacular architecture, despite its cultural and historical significance in shaping the identity and character of a place. Thus, it is crucial to continue researching and advocating for the preservation of traditional architecture in North Macedonia and around the world.

The strength of this study lies in its analysis which explores the architectural values of both rural and urban environments and their contribution to national and cultural identity. However, a potential weakness is its focus on the 19th-century house design in North Macedonia, which may limit the generalizability of the findings to other time periods or geographical regions. Additionally, the paper does not provide a comprehensive analysis of potential challenges or drawbacks associated with its preservation and promotion. However, this research serves as an essential reference for scholars and researchers interested in the

history and culture of the region. It is also a valuable resource for architects and designers seeking inspiration from the rich architectural heritage of the Balkans. Anyone seeking to understand the complexity and diversity of architecture in North Macedonia will find this study useful.

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